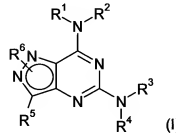
Amendments to the Claims

1. (Currently amended) A compound of formula (I)



(I)

wherein

$R^1$ is a cyclic group selected from $R^A$, $R^B$, $R^C$ and $R^D$, each of which is optionally substituted with one or more $R^7$ groups;

$R^2$ is hydrogen or $C_1$-$C_2$ alkyl;

$R^3$ and $R^4$ are each independently $C_1$-$C_8$ alkyl, $C_2$-$C_8$ alkenyl, $C_2$-$C_8$ alkynyl or $C_3$-$C_{10}$ cycloalkyl, each of which is optionally substituted with one or more $R^8$ groups, or $R^E$, which is optionally substituted with one or more $R^9$ groups, or hydrogen;

or $-NR^3R^4$ forms $R^F$, which is optionally substituted with one or more $R^{10}$ groups;

$R^5$ is -Y-$CONR^{15}R^{16}$;

$R^6$, which may be attached at $N^1$ or $N^2$, is $C_1$-$C_6$ alkyl, $C_1$-$C_6$ haloalkyl, $C_2$-$C_8$ alkenyl or $C_2$-$C_8$ alkynyl, each of which is optionally substituted by $C_1$-$C_6$ alkoxy, $C_1$-$C_6$ haloalkoxy or a cyclic group selected from $R^J$, $R^K$, $R^L$ and $R^M$, or $R^6$ is $R^N$, $C_3$-$C_7$ cycloalkyl or $C_3$-$C_7$ halocycloalkyl, each of which is optionally substituted by $C_1$-$C_6$ alkoxy or $C_1$-$C_6$ haloalkoxy, or $R^6$ is hydrogen;

$R^7$ is halo, $C_1$-$C_6$ alkyl, $C_1$-$C_6$ haloalkyl, $C_2$-$C_6$ alkenyl, $C_2$-$C_6$ alkynyl, $C_3$-$C_{10}$ cycloalkyl, $C_3$-$C_{10}$ halocycloalkyl, phenyl, $OR^{12}$, $OC(O)R^{12}$, $NO_2$, $NR^{12}R^{13}$, $NR^{12}C(O)R^{13}$, $NR^{12}CO_2R^{14}$, $C(O)R^{12}$, $CO_2R^{12}$, $CONR^{12}R^{13}$ or CN;

$R^8$ is halo, phenyl, $C_1$-$C_6$ alkoxyphenyl, $OR^{12}$, $OC(O)R^{12}$, $NO_2$, $NR^{12}R^{13}$, $NR^{12}C(O)R^{13}$, $NR^{12}CO_2R^{14}$, $C(O)R^{12}$, $CO_2R^{12}$, $CONR^{12}R^{13}$, CN, $R^G$ or $R^H$, the last two of which are optionally substituted with one or more $R^9$ groups;

$R^9$ is $C_1$-$C_6$ alkyl, $C_1$-$C_6$ haloalkyl or $CO_2R^{12}$;

$R^{10}$ is halo, $C_3$-$C_{10}$ cycloalkyl, $C_3$-$C_{10}$ halocycloalkyl, phenyl, $OR^{12}$, $OC(O)R^{12}$, $NO_2$, $NR^{12}R^{13}$, $NR^{12}C(O)R^{13}$, $NR^{12}CO_2R^{14}$, $C(O)R^{12}$, $CO_2R^{13}$, $CONR^{12}R^{13}$, CN, oxo, $C_1$-$C_6$ alkyl or $C_1$-$C_6$ haloalkyl, the last two of which are optionally substituted by $R^{11}$;

$R^{11}$ is phenyl, $NR^{12}R^{13}$ or $NR^{12}CO_2R^{14}$;

$R^{12}$ and $R^{13}$ are each independently hydrogen, $C_1$.$C_6$ alkyl or $C_1$-$C_6$ haloalkyl;

$R^{14}$ is $C_1$.$C_6$ alkyl or $C_1$-$C_6$ haloalkyl;

$R^{15}$ and $R^{16}$ are each independently selected from
- hydrogen,
- $C_1$-$C_6$ haloalkyl,
- $C_1$-$C_6$ alkyl optionally substituted with
  - $R^{17}$,
  - $-NR^{18}R^{19}$,
  - $-CO_2R^{20}$,
  - $-CONR^{21}R^{22}$,
  - $R^{23}$ or
  - phenyl optionally substituted by
    - halo,
    - $C_1$-$C_6$ alkyl or
    - $R^{17}$,
- $C_3$-$C_7$ cycloalkyl optionally substituted with
  - $C_1$-$C_6$ alkyl,
  - $R^{17}$ or
  - $-NR^{18}R^{19}$, and
- $R^{23}$;

or $NR^{15}R^{16}$ ~~constitutes~~ are taken together to form a 3- to 8-membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen, oxygen and sulphur, and which may optionally be further substituted with $R^{17}$, $C_1$-$C_6$ haloalkyl, $-CO_2R^{20}$, $-CONR^{21}R^{22}$, oxo or $C_1$-$C_6$ alkyl optionally substituted by $R^{17}$;

$R^{17}$ is hydroxy, $C_1$-$C_6$ alkoxy, $C_1$-$C_6$ (haloalkyl)oxy or $C_3$-$C_7$ cycloalkyloxy;

$R^{18}$ and $R^{19}$ are each independently selected from hydrogen and $C_1$-$C_6$ alkyl;

or -$NR^{18}R^{19}$ ~~constitutes~~ are taken together to form an azetidine, pyrrolidine, piperidine or morpholine ring;

$R^{20}$ is hydrogen or $C_1$-$C_6$ alkyl;

$R^{21}$ and $R^{22}$ are each independently selected from hydrogen, $C_1$-$C_6$ alkyl, $C_1$-$C_6$ haloalkyl and $C_3$-$C_7$ cycloalkyl;

or -$NR^{21}R^{22}$ ~~constitutes~~ are taken together to form a 3- to 8-membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen, oxygen and sulphur;

$R^{23}$ is a saturated 3- to 8-membered ring ~~which includes~~ containing at least one heteroatom selected from nitrogen, oxygen and sulphur, which ring may optionally be substituted by one or more $C_1$-$C_6$ alkyl groups, provided that the group $R^{23}$ is joined to the parent molecule by a covalent bond to a carbon atom of said ring;

$R^A$ and $R^J$ are each independently a $C_3$-$C_{10}$ cycloalkyl or $C_3$-$C_{10}$ cycloalkenyl group, each of which may be either monocyclic or, when there are an appropriate number of ring atoms, polycyclic and which may be fused to either

(a) a monocyclic aromatic ring selected from a benzene ring and a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur, or

(b) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

$R^B$ and $R^K$ are each independently a phenyl or naphthyl group, each of which may be fused to

(a) a $C_5$-$C_7$ cycloalkyl or $C_5$-$C_7$ cycloalkenyl ring,

(b) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur, or

(c) a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

$R^C$, $R^L$ and $R^N$ are each independently a monocyclic or, when there are an appropriate number of ring atoms, polycyclic saturated or partly unsaturated ring system containing between 3 and 10 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur, which ring may be fused to a $C_5$-$C_7$ cycloalkyl or $C_5$-$C_7$ cycloalkenyl group or a monocyclic aromatic ring selected from a benzene ring and a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

$R^D$ and $R^M$ are each independently a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms independently selected from nitrogen, oxygen and sulphur, which ring may further be fused to

(a) a second 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur;

(b) $C_5$-$C_7$ cycloalkyl or $C_5$-$C_7$ cycloalkenyl ring;

(c) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur; or

(d) a benzene ring;

$R^E$, $R^F$ and $R^G$ are each independently a monocyclic or, when there are an appropriate number of ring atoms, polycyclic saturated ring system containing between 3 and 10 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur;

$R^H$ is a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms independently selected from nitrogen, oxygen and sulphur; and

Y is a covalent bond, $C_1$-$C_6$ alkylenyl or $C_3$-$C_7$ cycloalkylenyl;

a tautomer thereof or a pharmaceutically acceptable salt~~, solvate or polymorph~~ of said compound or tautomer.

2. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein $R^1$ is $R^A$, which is optionally substituted with one or more $R^7$ groups; and

$R^A$ is a $C_3$-$C_{10}$ cycloalkyl group, which may be either monocyclic or, when there are an appropriate number of ring atoms, polycyclic, which may be fused to either

(a) a monocyclic aromatic ring selected from a benzene ring and a 5- or 6-membered heteroaromatic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur, or

(b) a 5-, 6- or 7-membered heteroalicyclic ring containing up to three heteroatoms selected from nitrogen, oxygen and sulphur.

3. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein $R^1$ is $R^B$, $R^C$, or $R^D$ each optionally substituted with one or more $R^7$ groups, wherein

$R^B$ is phenyl,

$R^C$ is a monocyclic saturated or partly unsaturated ring system containing between 5 and 7 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur,

$R^D$ is furanyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, isothiazolyl, thiazolyl, oxadiazolyl, pyridyl, pyridazinyl, pyrimidyl or pyrazinyl, and

$R^7$ is fluoro, methyl, ethyl, hydroxy, methoxy, propoxy or CONHMe.

4. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, wherein $R^2$ is hydrogen or methyl.

5. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, wherein ~~1 to 4 wherein~~ $R^3$ is hydrogen or $C_1$-$C_4$ alkyl, which is optionally substituted with one or more $R^8$ groups, or $R^3$ is azetidinyl, pyrrolidinyl or piperidinyl, each of which is optionally substituted with one or more $R^9$ groups, wherein

$R^8$ is hydroxy, methoxy, methoxyphenyl, $NH_2$, NHMe, $NMe_2$, $NHCO_2{}^tBu$, $NMeCO_2{}^tBu$, $CO_2H$, CONHMe, pyrrolidinyl, piperidinyl, morpholinyl or pyrazolyl, the last four of which are optionally substituted with one or more $R^9$ groups, and

$R^9$ is methyl or $CO_2{}^tBu$.

6. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 5~~ wherein $R^4$ is hydrogen, methyl or ethyl.

7. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 6~~ wherein $-NR^3R^4$ forms $R^F$, which is optionally substituted with one or more $R^{10}$ groups, wherein

$R^F$ is selected from azetidinyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, 3-azabicyclo[3.1.0]hex-3-yl, homopiperazinyl, 2,5-diazabicyclo[4.3.0]non-2-yl, 3,8-diazabicyclo[3.2.1]oct-3-yl, 3,8-diazabicyclo[3.2.1]oct-8-yl, 1,4-diazabicyclo[4.3.0]non-4-yl and 1,4-diazabicyclo[3.2.2]non-4-yl, and

$R^{10}$ is halo, methyl, ethyl, isopropyl, hydroxy, methoxy, $NH_2$, NHMe, $NMe_2$, $NHCO_2{}^tBu$, $CO_2H$, $CO_2{}^tBu$, oxo, benzyl, $-CH_2NH_2$, $-CH_2NHMe$, $CH_2NMe_2$ or $-CH_2NMeCO_2{}^tBu$.

8. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 7~~ wherein

$R^{15}$ and $R^{16}$ are each independently selected from hydrogen, $C_1$-$C_6$ alkyl optionally substituted with $R^{17}$, $-NR^{18}R^{19}$, $-CO_2R^{20}$, $-CONR^{21}R^{22}$, $R^{23}$ or phenyl optionally substituted by halo, $C_1$-$C_6$ alkyl or $R^{17}$, $C_3$-$C_7$ cycloalkyl and $R^{23}$, or $NR^{15}R^{16}$ ~~constitutes~~ are taken together to form a 5- to 7-membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen and oxygen, and which may optionally be further substituted with $R^{17}$, $-CO_2R^{20}$, $-CONR^{21}R^{22}$ or $C_1$-$C_6$ alkyl optionally substituted by $R^{17}$;

$R^{17}$ is hydroxy, $C_1$-$C_6$ alkoxy or $C_3$-$C_7$ cycloalkyloxy;

$R^{21}$ and $R^{22}$ are each independently selected from hydrogen, $C_1$-$C_6$ alkyl, and $C_3$-$C_7$ cycloalkyl, or $-NR^{21}R^{22}$ ~~constitutes~~ are taken together to form a 5- to 8-

membered ring ~~which may~~ optionally ~~include~~ containing one or more further heteroatoms selected from nitrogen and oxygen; and

$R^{23}$ is a saturated 5- to 7-membered ring ~~which includes~~ containing at least one heteroatom selected from nitrogen and oxygen, which ring may optionally be substituted by one or more $C_1$-$C_6$ alkyl groups.

9. (Currently amended) A compound according to any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, ~~1 to 8~~ wherein $R^6$ is positioned on $N^1$.

10. (Currently amended) A compound according to claim 9, or a pharmaceutically acceptable salt thereof, wherein $R^6$ is hydrogen, methyl, ethyl, isopropyl, isobutyl, methoxyethyl, methoxypropyl, ethoxyethyl, ethoxypropyl, propoxyethyl, 2,2,2-trifluoroethyl, tetrahydrofuranylmethyl, tetrahydropyranylmethyl, tetrahydropyranyl or pyridinylmethyl.

11. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein

$R^1$ is a cyclic group selected from $R^A$, $R^B$, $R^C$ and $R^D$, each of which is optionally substituted with one or more $R^7$ groups;

$R^7$ is halo, $C_1$-$C_6$ alkyl, $C_1$-$C_6$ haloalkyl, $OR^{12}$ or $CONR^{12}R^{13}$;

$R^8$ is halo, phenyl, $C_1$-$C_6$ alkoxyphenyl, $OR^{12}$, $NR^{12}R^{13}$, $NR^{12}CO_2R^{14}$, $CO_2R^{12}$, $CONR^{12}R^{13}$, $R^G$ or $R^H$, the last two of which are optionally substituted with one or more $R^9$ groups;

$R^A$ is a monocyclic $C_5$-$C_7$ cycloalkyl group;

$R^B$ is phenyl;

$R^C$ is a monocyclic saturated ring system containing between 5 and 7 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur;

$R^D$ is a 5-membered heteroaromatic ring containing a heteroatom selected from nitrogen, oxygen and sulphur and optionally up to two further nitrogen atoms in the ring, or a 6-membered heteroaromatic ring including 1, 2 or 3 nitrogen atoms;

$R^E$ is a monocyclic saturated ring system containing between 3 and 7 ring atoms containing one nitrogen atom;

$R^F$ is a monocyclic or, when there are an appropriate number of ring atoms, polycyclic saturated ring system containing between 3 and 10 ring atoms containing at least one nitrogen atom and optionally one other atom selected from oxygen and sulphur;

$R^G$ is a monocyclic saturated ring system containing between 3 and 7 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur; and

$R^H$ is a 5- or 6-membered heteroaromatic ring containing up to two nitrogen atoms.

$R^3$ is hydrogen, $C_1$-$C_4$ alkyl, which is optionally substituted with one or more $R^8$ groups, or $R^E$, which is optionally substituted with one or more $R^9$ groups;

$R^4$ is hydrogen, $C_1$-$C_6$ alkyl or $C_1$-$C_6$ haloalkyl;

or $-NR^3R^4$ forms $R^F$, which is optionally substituted with one or more $R^{10}$ groups;

$R^6$ is $C_1$-$C_4$ alkyl or $C_1$-$C_4$ haloalkyl, each of which is optionally substituted by $C_1$-$C_4$ alkoxy, $C_1$-$C_4$ haloalkoxy or a cyclic group selected from $R^J$, $R^L$ and $R^M$, or $R^6$ is $R^N$ or hydrogen;

$R^J$ is cyclopropyl or cyclobutyl;

$R^L$ and $R^N$ are each independently a monocyclic saturated ring system containing either 5 or 6 ring atoms, of which at least one is a heteroatom selected from nitrogen, oxygen and sulphur;

$R^M$ is a 5- or 6-membered heteroaromatic ring containing a heteroatom selected from nitrogen, oxygen and sulphur; and

Y is a covalent bond.

12. (Currently amended) A compound according to claim 1, or a pharmaceutically acceptable salt thereof, selected from:

1-(2-ethoxyethyl)-*N*-ethyl-5-(ethylamino)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-(2-(methylamino)ethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-*N*-(2-(dimethylamino)ethyl)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-*N*-(piperidin-4-yl)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-(2-methoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

(2*R*)-2-{[5-(dimethylamino)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carbonyl]amino}propionic acid,

3-{[5-(dimethylamino)-1-(2-ethoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carbonyl]amino}propionic acid,

1-(2-ethoxyethyl)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-5-(piperazin-1-yl)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-*N*-methyl-5-((3*R*)-3-methylpiperazin-1-yl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-*N*-ethyl-5-((3*R*)-3-methylpiperazin-1-yl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-(ethylamino)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-*N*-(2-methoxyethyl)-5-(methylamino)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

5-(dimethylamino)-1-(2-ethoxyethyl)-*N*-(2-hydroxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-(ethylamino)-*N*-(2-methoxyethyl)-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-(*N*-(2-hydroxyethyl)-*N*-methylamino)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

1-(2-ethoxyethyl)-5-((2-methoxyethyl)amino)-*N*-methyl-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide,

7-(cyclohexylamino)-1-(2-ethoxyethyl)-*N*-methyl-5-((3*R*)-3-methylpiperazin-1-yl)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide, and

1-(2-ethoxyethyl)-*N*-methyl-5-[*N*-methyl-*N*-((3*S*)-1-methylpyrrolidin-3-yl)amino]-7-(4-methylpyridin-2-ylamino)-1*H*-pyrazolo[4,3-*d*]pyrimidine-3-carboxamide

and tautomers thereof and pharmaceutically acceptable salts, solvates and polymorphs of said compound or tautomer.

13. (Original) A pharmaceutical composition comprising a compound of ~~formula (I) as claimed in any one of claims 1 to 12~~ claim 1, or a pharmaceutically acceptable salt ~~salts, solvates or polymorphs~~ thereof, and a pharmaceutically acceptable diluent or carrier.

14. – 15. (Canceled)

16. (New) A method of treating a disease, disorder or condition in a mammal, said method comprising administering to said mammal in need thereof a therapeutically effective amount of a compound of claim 1, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition comprising a compound or claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable diluent or carrier, wherein said disease, disorder or condition is male erectile disorder or pulmonary hypertension.